

U.S. Application No. 09/311,996
Attorney Docket Number 09367.0052-00000

REMARKS

Applicants respectfully request reconsideration of the rejections set forth in the Office Action mailed on May 10, 2004. All claims have been rejected. Claims 49-57, 60, 61, and 63-66 are now pending.

The specification has been amended to incorporate further elaboration regarding the use of different cell lines. Support for this amendment can be found, for example, in U.S.S.N. 60/134,104, page 27, lines 16-17. As the '104 application (Attorney Docket Number 19681-000300US) was incorporated into the present application by reference in its entirety for all purposes, Applicants respectfully maintain that the amendment incorporates no new matter.

Claim amendments were made to better define one embodiment of the invention, notwithstanding the Applicants' belief that the unamended claims would have been allowable, without acquiescing to any of the Examiner's arguments, and without waiving the right to prosecute the unamended (or similar) claims in another application, for the purpose of furthering Applicants' business goals and expediting the patent application process in a manner consistent with the PTO's Patent Business Goals. None of the amendments to the claims is related to the statutory requirements of patentability unless expressly stated so herein.

The comments in the Office action are now addressed in turn.

Information Disclosure Statements

Applicants acknowledge the return of the signed copies of the PTO-1449 forms associated with the Information Disclosure Statements filed July 31, 2003 and July 7, 2003.

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Rejections under 35 U.S.C. §112, First Paragraph

Claims 49-57, 60, 61 and 63-66 been rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Office has indicated that the specification does not describe composite descriptors which comprise features of different cell types. Applicants respectfully disagree and traverse this rejection.

The claimed invention provides computer program products for determining a property of a manipulation based upon determination of effects of the manipulation on a plurality of different cell types; computer program products comprising a machine readable medium on which is provided program instructions for determining an effect of a manipulation on a plurality of cells of different cell types; and computer program products comprising a machine readable medium on which is provided program instructions for predicting properties of a chemical compound based on information about effects of at least one of a plurality of known compounds on a plurality of cells of different cell types.

More specifically, claim 49 provides a computer program product that includes code for analyzing a plurality of features to yield a plurality of descriptors, wherein some of the features are from a first cell type and some of the features are from a second cell type, and wherein some of the features from a first cell type are combined with features from a second cell type to yield one or more composite descriptors. The computer program product of claim 56 includes code for combining the plurality of features wherein some of the features are from a first cell type and some of the features are from a second cell type, and wherein some of the features from a first type are combined with features from a second cell type to yield one or more composite features. Claim 63 provides a computer program product including code for determining, from the one or more images, multiple descriptors for multiple components of the plurality of cells of the

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different cell lines, wherein the code for determining a multiple descriptors comprises code for performing principal component analysis on the multiple descriptors, wherein the descriptors are determined for at least two different cell lines and wherein at least some of the descriptors combine features from cells of different cell types.

As such, in each of these embodiments, the computer program product includes code for combining features from a first cell type with features from a second cell type. Support for the combination of features can be found, for example, at page 3, lines 7-8 ("Descriptors can be formed by combining features of two or more cell components as identified using the markers."); and at page 3, lines 27-28 ("descriptors can be derived by measurements and combinations of measurements and the like). Moreover, as noted on page 12 of the specification:

Descriptors can comprise scalar or vector values, representing quantities such as area, perimeter, dimensions, intensity, aspect ratios, and the like. Other types of descriptors include one or any combination of characteristics such as a cell count, an area, a perimeter, a length, a breadth, a fiber length, a fiber breadth, a shape factor, an elliptical form factor, an inner radius, an outer radius, a mean radius, an equivalent radius, an equivalent sphere volume, an equivalent prolate volume, an equivalent oblate volume, an equivalent sphere surface area, an average intensity, a total intensity and an optical density. In some embodiments, descriptors can include averages or standard deviation values, or frequency statistics from other descriptors collected across a population of cells. In some embodiments, descriptors can be reduced using techniques such as principal component analysis and the like. *In some embodiments, the descriptors include features from different cell portions or cell types.*

(Emphasis added.) Applicants therefore maintain that the specification includes ample description of the function of combining of features from different cell types.

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The Federal Circuit has held that a description of the functions that a software program is to perform is sufficient to satisfy the written description requirement of section 112. In *In re Hayes Microcomputer Prods, Inc. Patent Litigation*, 25 U.S.P.Q.2d 1241 (Fed. Cir. 1992), the court held that the disclosure of the use of a microprocessor to implement a claimed software "timing means" and the disclosure of the functions the processor was to perform in implementing the claimed timing means was a sufficient written description even though the software structure of the "timing means," i.e., the firmware and the firmware listing, was not disclosed. Further, the court held in *Robotic Vision Systems, Inc. v. View Engineering, Inc.*, 42 U.S.P.Q.2d 1619, 1622-23 (Fed. Cir. 1997) that "when disclosure of software is required, it is generally sufficient if the functions of the software are disclosed, it usually being the case that creation of the specific source code is within the skill of the art."

Therefore, the specification contains a description of descriptors which comprise features of different cell types. Applicants respectfully request that the rejection be withdrawn.

Rejections under 35 U.S.C. §112, Second Paragraph

Claims 49-55 and 66 been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and claim the invention. The Office has expressed concerns regarding the antecedent basis for the limitation "the combination of features from cells of different cell types." Applicants have amended the claims to clarify the antecedent basis. Applicants request that the rejection be withdrawn.

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Conclusion

Applicants respectfully maintain that all pending claims are in condition for allowance. Therefore, Applicants respectfully request a Notice of Allowance for this Application from the Examiner. Should any unresolved issues remain, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Please grant any extensions of time required to enter this reply, and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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